Serial No.: 09/624,785

AMENDMENTS IN THE CLAIMS:

1. (Currently Amended) A network receiver comprising:

a) an analog to digital converter generating a sequence of sample values comprising a digital carrier signal representing a modulated carrier signal received from a transmitting device;

b) an adaptive equalizer utilizing a set of adaptive filter coefficients to filter the digital carrier signal to generate an equalized digital carrier signal; and

c) a coefficient cache storing a plurality of sets of coefficients, the adaptive equalizer selecting one of the plurality of sets of coefficients to use for filtering,

wherein while a selected one of the plurality of sets of coefficients is utilized to filter the digital carrier signal, the equalizer further includes circuitry for simultaneously calculating a new set of coefficients for use by the equalizer for receipt of subsequent frames.

2. (Original) The network receiver of claim 1, further including a slicer receiving the equalized digital carrier signal, mapping the digital carrier signal to a plurality of defined constellation points to recover the transmitted data, and providing the equalizer with an error signal representing the distortion between the equalized carrier signal and the defined constellation points and wherein the equalizer utilizes the error signal to select one of the plurality of sets of coefficients providing minimal error.

3. (Original) The network receiver of claim 2, wherein each of the plurality of sets of coefficients is a set of coefficients determined to filter a digital carrier signal with particular distortion characteristics.

4. (Original) The network receiver of claim 3, wherein the selection is performed during a frame training sequence in which the equalizer compares the error signal

corresponding to a plurality of sets of coefficients for a training portion of the frame in which a predetermined bit sequence is transmitted.

5. (Original) The network receiver of claim 4, wherein the distortion characteristics are a result of network topology and the transmitters physical location on the network and each of the plurality of sets of coefficients is a set of coefficients determined to filter a digital carrier signal from a transmitter at a particular physical location.

6. (Original) The network receiver of claim 5, wherein the equalizer includes a multi-tap finite impulse response filter.

7. (Canceled)

8. (Currently Amended) A method of receiving a data frame transmitted on a network medium, the method comprising:

a) generating a sequence of digital sample values comprising a digital carrier signal representing the transmitted frame;

b) selecting one of a plurality of sets of filter coefficients for use by an adaptive equalizer; and

c) filtering the digital carrier signal utilizing the selected set of filter coefficients to generate an equalized digital carrier signal,

wherein while a selected one of the plurality of sets of coefficients is utilized to filter the digital carrier signal, simultaneously calculating a new set of coefficients for use in equalizing subsequent frames.

9. (Original) The method of claim 8, further including slicing the equalized digital carrier signal by mapping the digital carrier signal to a plurality of defined constellation points to recover the transmitted data, and providing the equalizer with an error signal

representing the distortion between the equalized carrier signal and the defined constellation points.

10. (Original) The method of claim 9, further including utilizing the error signal to select the set of coefficients providing minimal error.

11. (Original) The method of claim 10, wherein each of the plurality of sets of coefficients is a set of coefficients determined to filter a digital carrier signal with particular distortion characteristics.

12. (Original) The method of claim 11, wherein the step of selecting is performed during a frame training sequence in which a predetermined bit sequence is transmitted.

A1 Cont

13. (Original) The method of claim 12, wherein the distortion characteristics are a result of network topology and the transmitters physical location on the network and each of the plurality of sets of coefficients is a set of coefficients determined to filter a digital carrier signal from a transmitter at a particular physical location.

14. (Original) The method of claim 13, wherein the step of filtering utilizes a multi-tap finite impulse response filter.

15. (Canceled)

16. (Currently Amended) A network receiver comprising:

a) an adaptive coefficient filter for removing distortion from a received data signal;

b) a coefficient cache storing a plurality of sets of coefficients for use by the adaptive coefficient filter; and

Serial No.: 09/624,785

c) a selection circuit, operating during a training sequence of the received data signal, for selecting one of the plurality of sets of coefficients for use by the adaptive coefficient filter,

wherein while a selected one of the plurality of sets of coefficients is utilized to filter the digital signal, the network receiver further includes circuitry for simultaneously calculating a new set of coefficients for use by the adaptive coeficient filter for receipt of subsequent frames.

17. (Canceled)

18. (Currently Amended) The network receiver of claim ~~17~~ 16, further including a slicer receiving a filtered signal from the adaptive coefficient filter, mapping the filtered signal to a plurality of defined constellation points to recover the transmitted data, and providing the selection circuit with an error signal representing the distortion between the filtered signal and the defined constellation points and wherein the selection circuit utilizes the error signal to select one of the plurality of sets of coefficients providing minimal error.

19. (Original) The network receiver of claim 18, wherein the selection is performed during a frame training sequence in which the equalizer compares the error signal corresponding to a plurality of sets of coefficients for a training portion of the frame in which a predetermined bit sequence is transmitted.